

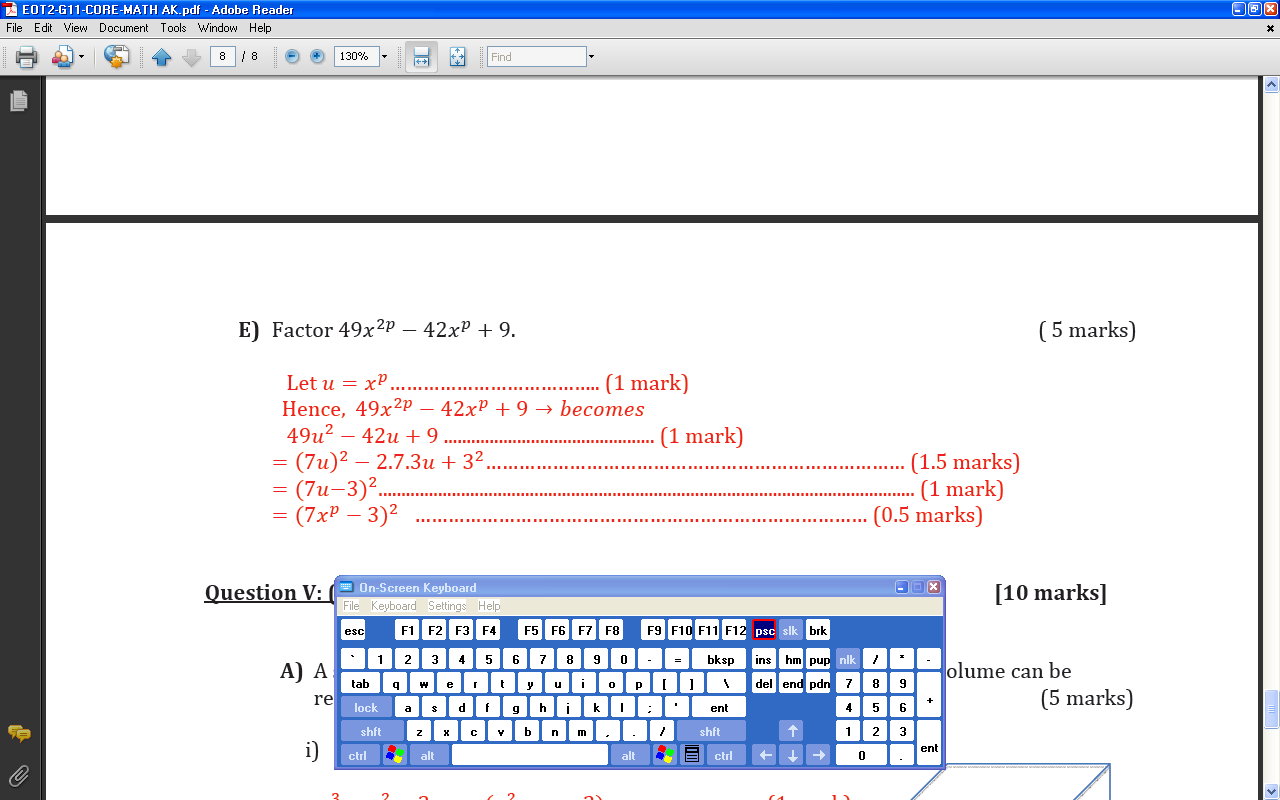
**ATHS FC – Math Department Al Ain (2012-2013)**

**Homework Sheet(Term II)**

**Grade 11 Core**

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| **Name** |  | **Date** |  |
| **Section** |  | **Lessons** | 5.5 Solving Polynomial Equations  5.6 The Remainder & Factor Theo |
| **ID** |  | **Score/20** |  |

1. **Factor completely. If the polynomial is not factorable, write *prime*.**
2. 3*x*3*y*2 − 2*x*2*y* + 5*xy*
3. 125*b*3 + *c*3
4. *x*2 − *xy* + 2*x* − 2*y*

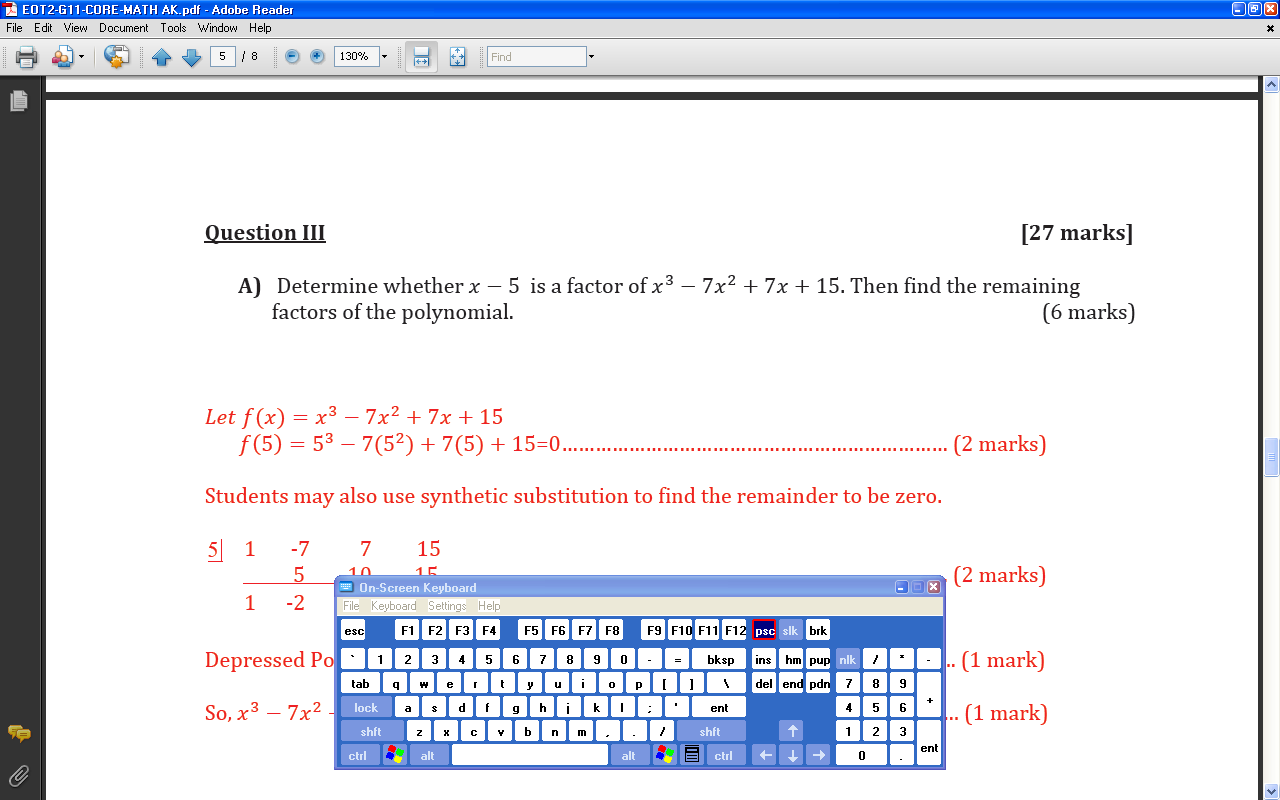
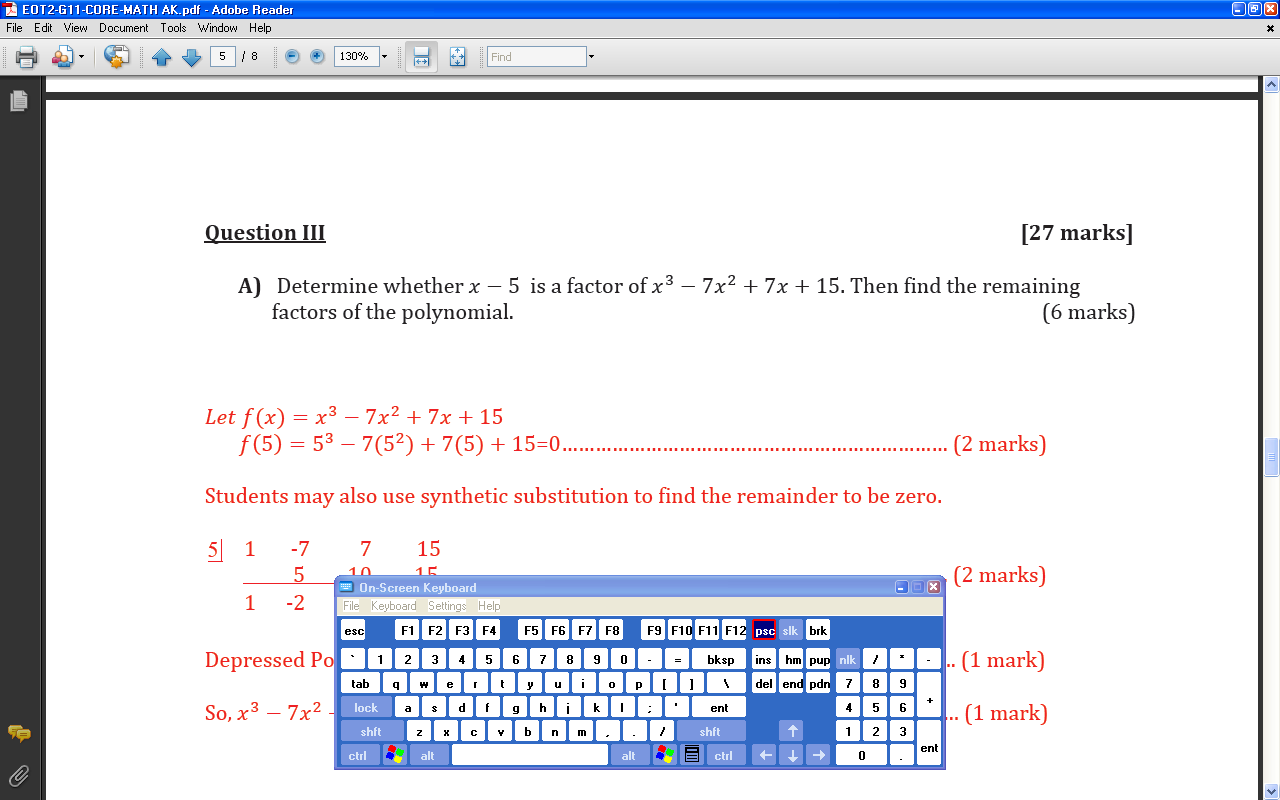


2. **Write each expression in quadratic form, if possible.**
3. -5*x*8 + *x*2 + 6
4. 4*s*8 + 4*s*4 + 7
5. **Solve each equation.**
6. *s*5 + 4*s*4 − 32*s*3 = 0
7. *m*4 − 625 = 0
8. *8 x*4 +10*x*2 -3 = 0
9. **Use synthetic substitution to find *f*(-3) and *f*(4) for the function.**

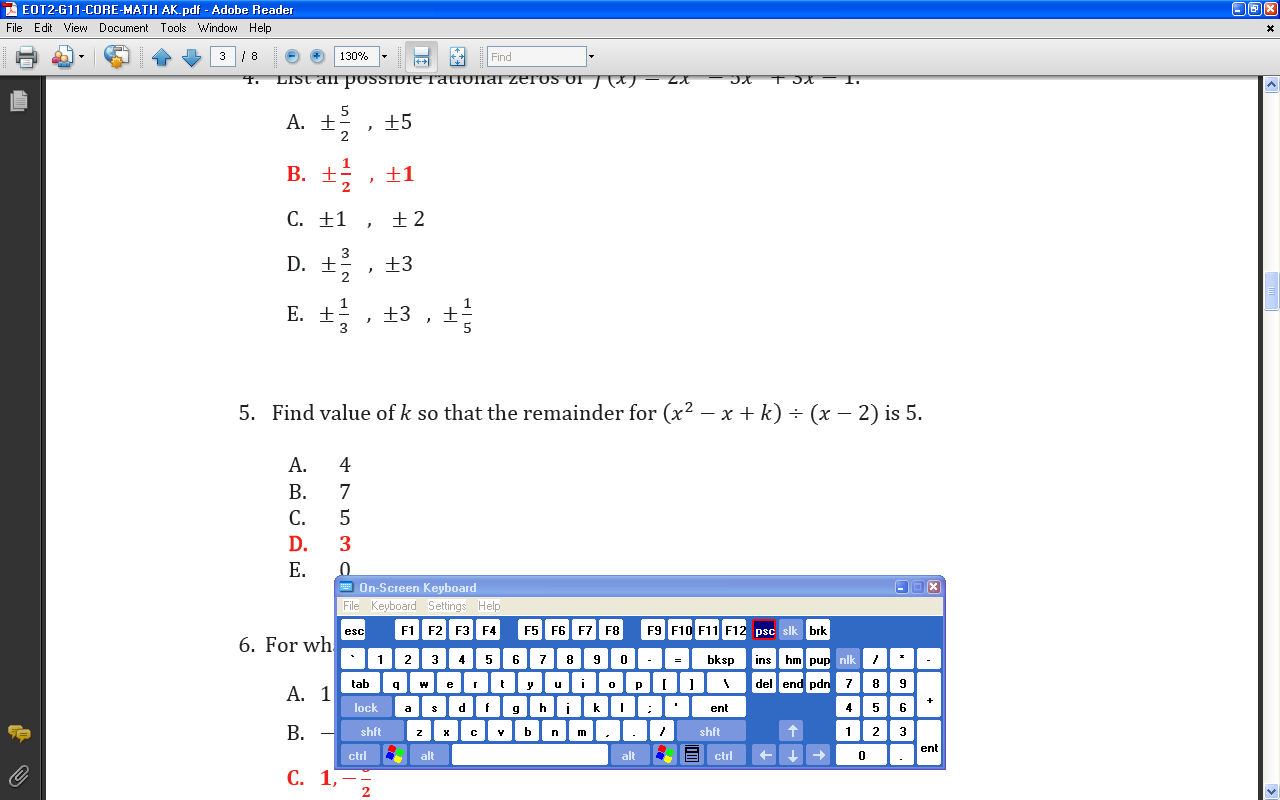
*f*(*x*) = *x*3 − 6*x*2 + 2*x*

1. **Given a polynomial and one of its factors, find the remaining factors of the polynomial**
   1. *x*3 + 5*x*2 − 2*x* – 24 ; *x* − 2

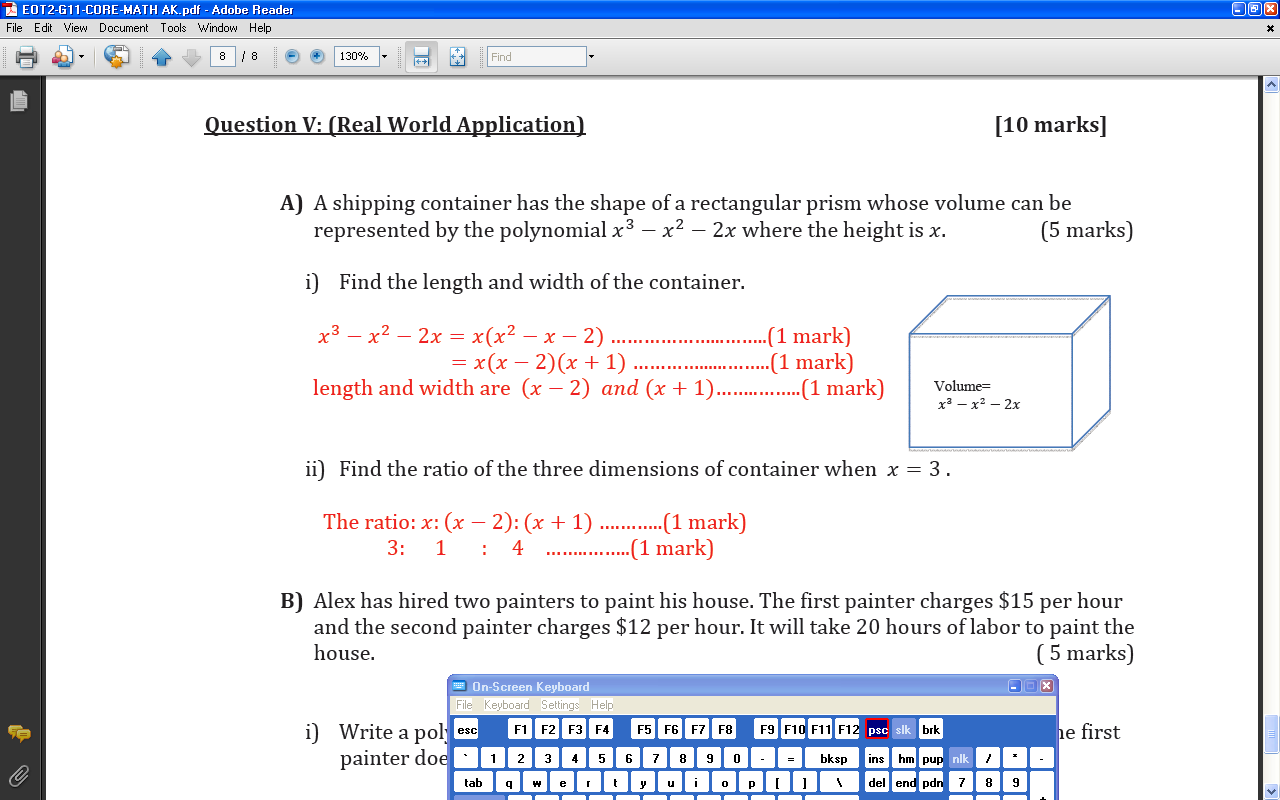
* 1. 4*x*3 − 12*x*2 − *x* + 3 ; *x* − 3

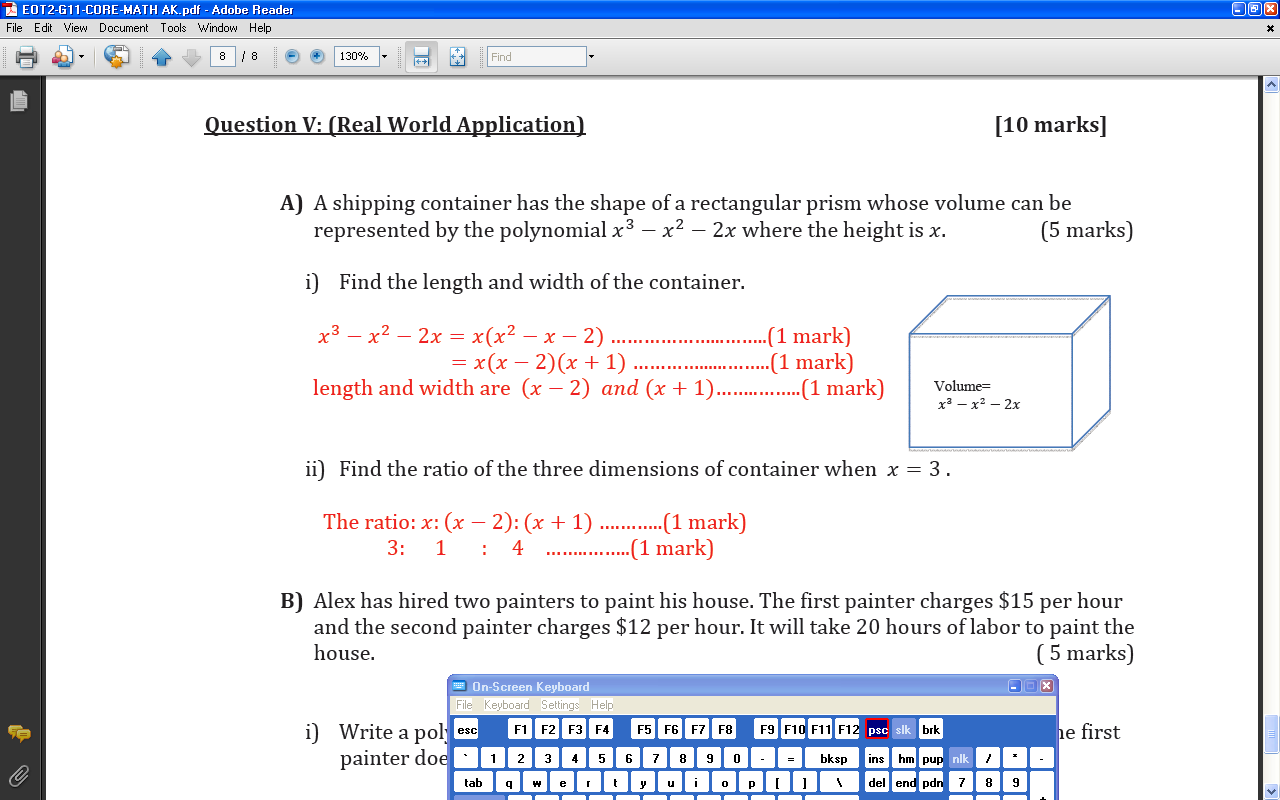


1. **Determine whether is a factor of . Then find the remaining factors of the polynomial.**

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1. **Find value of *k* so that the remainder for is 5.**

1. **A shipping container has the shape of a rectangular prism whose volume can be represented by the polynomial**

**where the height is *x*.** 

1. **Find the length and width of the container.**
2. **Find the ratio of the three dimensions of container when *x =* 3 .**